

FOUR NEW PHLÆOTHIRIPIDÆ (THYSANOPTERA) FROM NEW YORK.

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Hindsiana dodgei sp. nov.

Female (macropterous).—Length about 1.7 mm. Color yellow, with head, thorax, and apical abdominal segments brown, head darkest anteriorly; legs yellow, with femora darkened with brown on outer surface; antennae with segment 1, base and sides of 2, and all of 5–8 about concolorous with head, sometimes more yellowish basally; remainder of 2 and all of 3 yellow, somewhat darkened with brown; 4 brownish yellow; wings of both pairs yellowish gray, darkest along margins, distal portion of hind wings darkest in posterior half; subhypodermal pigmentation orange by reflected light, brown by transmitted light, that in abdomen disposed largely at sides.

Head about one and one-third times as long as wide, broadest slightly behind eyes, thence narrowed to base, which is about 0.8 the greatest width, cheeks nearly straight; dorsal and lateral surfaces without sculpture, bristles minute and barely visible; vertex evenly declivous, not at all produced nor overhanging; postocular bristles longer than eyes, pointed, situated close to sides of head. Eyes about 0.31 as long as head, hardly half as wide as their interval, rounded but, not protruding. Ocelli of posterior pair very widely separated, nearly touching eyes; anterior ocellus directed more nearly upward than forward. Antennae nearly 1.9 times as long as head, of the general form and structure common to the genus, segments 7 and 8 broadly united; sense cones: 3, 1–1; 4, 1–2; 5, 1–1⁺; 6, 1–1⁺; 7 with one on dorsum near apex. Mouth cone blunt, less than half as long as greatest width of head, not attaining middle of prosternum.

Prothorax 0.7 as long as head and (inclusive of coxae) about 1.9 times as wide as long, with evident median thickening; surface smooth; anterior marginal bristles minute, anterior angulars half as long as others, which are about equal in length to postoculars, yellowish and pointed, excepting outer pair at posterior angles, which are slightly dilated at tip; coxal bristles shorter, pointed. Pterothorax about equal in width to prothorax, sides nearly parallel in anterior half, roundly converging posteriorly. Legs moderately short, fore and hind femora somewhat swollen, fore tarsus unarmed, but with a prominently projecting claw on inner surface. Wings

of fore pair not narrowed at middle and without accessory hairs on posterior margin; outer subbasal bristle long and pointed, others shorter and somewhat dilated at tip.

Abdomen of normal form; tube about 0.6 as long as head, twice as long as basal width, and twice as wide at base as at apex. Abdominal bristles pointed, yellow, those at apex of segment 9 about 1.5 times as long as tube; terminal bristles more than twice the length of the tube, brown.

Measurements of holotype (♀): Length 1.71 mm.; head, length 0.24 mm., greatest width 0.18 mm., width at base 0.14 mm.; eyes, length 0.076 mm., width 0.042 mm., interval 0.090 mm.; postocular bristles, length 0.087 mm.; prothorax, length 0.17 mm., width (inclusive of coxae) 0.31 mm.; pterothorax, width 0.32 mm.; abdomen, width 0.35 mm.; tube, length 0.14 mm., width at base 0.074 mm., at apex 0.037 mm.

Antennal segments	1	2	3	4	5	6	7	8
Length (μ)	45	57	63	63	60	57	57	37
Width (μ)	43	31	35	34	30	27	23	15
Total length of antenna 0.44 mm.								

Male (brachypterous).—Color much paler than in female; head nearly yellow in posterior half, prothorax dark brown, pterothorax paler, especially at middle, legs less shaded with brown, 9th and 10th abdominal segments abruptly dark brown; segment 1 of antenna concolorous with head, 2–4 yellow, 4 often more or less overcast with grayish, 5–8 successively darker. Eyes small. Median ocellus exceedingly minute, others wanting. Pterothorax much narrower than prothorax. Fore tarsus unarmed, but with the usual prominent claw on inner surface.

Described from two females and three males taken by the writer near Macedon, New York, May 4, 1924, under dead elder bark.

This is a very pretty species and one which may easily be recognized by the coloration and the long, pointed bristles. The form of the fore wings would appear to exclude it from the genus to which I have assigned it; but in all other respects it agrees well with its congeners.

It is named after Prof. Charles Wright Dodge, of the University of Rochester, who has accorded me every possible facility and encouragement for the prosecution of entomological work.

***Hindsiana pullata* sp. nov.**

Female (apterous).—Length about 1.25 mm. Color dark blackish brown (nearly black), with extreme tips of all

Antennal segments	1	2	3	4	5	6	7	8
Length (μ)	39	54	55	56	58	55	50	44
Width (μ)	32	34	28	32	30	26	25	16

Total length of antenna 0.411 mm.

Described from one female, taken by the writer under a loose scale of bark on a living apple tree, near Macedon, New York, January 23, 1924. Seen under a hand lens the living insect was jet black and highly polished. Careful search on many subsequent occasions has failed to reveal further specimens.

An unusual species, not only in the coloration of the antennae and legs, but also in the long postocular bristles, the entire absence of ocelli, the lanceolate terminal segment of the antennae, and the short, broad tube. The pale knees and habitat suggest *Rhynchothrips*, but the mouth cone is of the *Haplothrips* type. Its assignment to *Hindsiana* is to be considered provisional only.

***Trichothrips fumiceps* sp. nov.**

Female (brachypterous).—Length about 1.9 mm. Color brownish yellow, with head, prothorax, sides of pterothorax, and terminal abdominal segments (except tube) darkened with blackish brown, the head darkest; tube yellow, tipped with gray; segment 1 of antennae concolorous with head, 2 lighter, especially toward apex, 3 yellow, 4 shaded with darker at tip, 5–8 grayish, the segments often successively darker; subhypodermal pigmentation orange-yellow by reflected light, brown by transmitted light.

Head slightly broader than long, sides straight, very slightly converging posteriorly; occipital region faintly subreticulate and with the usual minute bristles; postocular bristles about half as long as head, pointed. Eyes small, directed forward, only about one-fifth the length of the head, and about one-third as wide as their interval. Anterior ocellus situated well down toward antennae, directed slightly forward, and somewhat overhanging; posterior ocelli wanting. Antennae distinctly more than twice the length of the head; segment 1 large and tapering to apex; 2 longer and narrower than 1; 3 the longest, subconical; 4–6 equal in length, pedicellate; 7 shorter, pedicellate; 8 longer than 7, lanceolate, pedicellate; sense cones: 3, 1–2; 4, 2–2; 5, 1–1⁺; 6, 1–1⁺; 7 with one on *outer angle*. Mouth cone broadly rounded at apex, reaching nearly across prosternum; labrum acutely pointed, slightly surpassing labium.

Prothorax slightly longer than head and (inclusive of coxae) about 1.8 times as wide as long; anterior marginal bristles minute; anterior angulars distinct, but short; others long, pointed, subequal to coxal, fully as long as postoculars and four or five times as long as anterior angulars. Pterothorax slightly narrower than prothorax, sides almost paral-

lel, except for the projecting anterior angles. Wings indistinguishable. Fore tarsus with a long, stout, straight tooth.

Abdomen normal, slightly wider than prothorax. Tube (measured along ventral surface) nearly as long as head, somewhat more than twice as long as basal width, and more than twice as broad at base as at apex. Bristles long and pointed, those on the ninth segment almost as long as the tube; terminal bristles fully two-thirds the length of the tube.

Measurements of holotype (♀): Length 1.91 mm.; head, length 0.195 mm., width 0.206 mm.; eyes, length 0.040 mm., width 0.036 mm., interval 0.105 mm.; postocular bristles, length 0.105 mm.; prothorax, length 0.218 mm., width (inclusive of coxae) 0.386 mm.; pterothorax, width 0.357 mm.; abdomen, width 0.480 mm.; tube, length 0.188 mm., width at base 0.087 mm., at apex 0.041 mm.

Antennal segments	1	2	3	4	5	6	7	8
Length (μ)	49	60	62	56	55	55	45	57
Width (μ)	48	35	40	39	39	36	30	20

Total length of antenna 0.44 mm.

Male (brachypterous).—Only slightly smaller than female and similar in structure; fore femora hardly more swollen than in female, tarsal tooth scarcely stronger.

Nymphs.—Orange yellow.

Described from 12 females, 29 males and several nymphs of various instars, taken under the bark of a willow branch, at Potter, New York, April 26, 1924, by the writer.

The lanceolate eighth antennal segment and the pale coloration place this species as a true *Trichothrips*, close indeed to the type species *pedicularius* and to the North American species *americanus*, *angusticeps*, *marginalis*, etc. From these, and from all others of the genus known to me, the brachypterous (perhaps apterous) form differs conspicuously in having only one ocellus and in the position of the sense cone on the seventh antennal segment. In *fumiceps* this sense cone is situated on the *side* of the segment, at the outer angle, instead of on the dorsum near the apex. In *marginalis*, its closest relative, the sense cone is intermediate in position, though more dorsal than lateral. Casually observed, *fumiceps* is more suggestive, perhaps, of *semicaecus*, but the character of the eighth antennal segment is utterly different. In life the dark colored head was visible to the naked eye, and marked the species at once as an addition to the North American fauna.

Rhynchothrips russelli sp. nov.

Female, forma brachyptera.—Length about 1.5 mm. Color dark brown (black to the naked eye), with trochanters, tarsi, and apices of all femora and tibiae yellow, sometimes darkened slightly with brownish; antennae yellow, usually more or less darkened with brown at sides of segments 1 and 2 and in segments 4–8, the pedicels of 4 and 5 invariably brownish, 3 frequently with an obscure brown band at basal two-fifths.

Head 1.1 times as wide as long, broadest somewhat behind eyes; cheeks rounded, distinctly converging posteriorly; lateral and dorsal surfaces striate with widely spaced anastomosing lines, almost subreticulate, and with the usual minute, transparent bristles; vertex roughened, broadly rounded in front, slightly overhanging insertion of antennae and bearing the anterior ocellus at its extremity; postocular bristles about as long as eyes, blunt but not knobbed, dark in color. Eyes about one-third as long as head, subcircular as seen from above, distinctly wider than their interval, ventral extent much less than dorsal. Ocelli situated well forward. Antennae about two and one-fourth times as long as head; segment 3 clavate, symmetrical; 4–6 pedicellate, 4 shorter than 5 and about 1.6 times as long as wide; 7 subpedicellate; 8 rather broadly united to 7. Mouth cone only moderately long, about attaining mesosternum.

Prothorax along median dorsal line about 0.9 as long as head and (inclusive of coxae) from two to two and one-fourth times as wide as long, without a median dark line; all bristles present, rather dully pointed, dark in color, the two pairs at posterior angles longer than postoculars, midlaterals half as long and about equal to the two pairs on anterior margin. Pterothorax slightly wider than prothorax, sides straight, somewhat diverging posteriorly. Wings nearly attaining base of abdomen, brown in color, and with the three usual subbasal bristles short, about equal to those on anterior margin of pronotum, stout, pointed and brown. Legs short, moderately slender; fore tarsi unarmed.

Abdomen large, broad, about 1.4 times as wide as prothorax. Tube about 0.9 as long as head, less than twice as long as basal width and fully twice as wide at base as at apex, sides straight. Bristles dully pointed, brown; lateral bristles on segment 9 only a little more than half as long as tube, shorter than terminal bristles.

Measurements of holotype (♀): Length 1.52 mm.; head, length 0.180 mm., width behind eyes 0.198 mm., at base

0.174 mm.; prothorax, length 0.155 mm., width (inclusive of coxae) 0.348 mm.; pterothorax, width 0.360 mm.; abdomen, width 0.404 mm.; tube, length 0.158 mm.; width at base 0.082 mm., at apex 0.038 mm.

Antennal segments	1	2	3	4	5	6	7	8
Length (μ)	39	57	62	56	57	59	53	32
Width (μ)	33	34	30	35	32	32	27	15

Total length of antenna, 0.42 mm.

Female, forma macroptera.—Similar, but with eyes and pterothorax larger, antennae somewhat darker, and pedicel of segment 7 of antennae more constricted. Wings of fore pair broad, dark brown to just beyond the third subbasal bristle, remainder very lightly and uniformly clouded with brownish; posterior margin with 9 or 10 accessory hairs; hind wings with faint median vein extending to middle.

Male (brachypterous).—Smaller than female, and with more slender abdomen; fore tarsi unarmed.

Described from 15 females, of which one is macropterous, and one male, collected as follows:

Keene Valley, New York, June 24, 1911, 1 ♀, on Virginia creeper, Mrs. W. S. Stewart (ex collection H. M. Russell).

Beltsville, Maryland, May 2, June 9 and July 4, 1915, 12 ♀ ♀, on Virginia creeper and in miscellaneous collecting, W. L. McAtee.

Great Falls, Maryland, May 23, 1915, 2 ♀ ♀, 1 ♂, on Virginia creeper, J. D. H.

Type locality: Beltsville, Maryland.

My attention was first called to this species a number of years ago by the late Mr. H. M. Russell, and it is therefore appropriate that it be known by his name. It appears to be a very distinct little species, readily known from all described forms of the genus by the short pronotum.